Los Alamos National Laboratory

Frontiers in Biological Physics III: Neural Biology

ICAM SYMPOSIUM

June 18-20, 2004 - Aspen, Colorado

Invited Speakers

Henry Abarbanel
UC-San Diego

Larry Abbott
Brandeis University

Michael Brainard
UC-San Francisco

Dmitri Chklovskii
Cold Spring Harbor Lab

Allison Doupe
UC-San Francisco

Michale Fee
MIT

Lawrence Katz
Duke Univ. Medical Center

Nancy Kopell
Boston University

Gilles Laurent
Cal Tech

Daniel Margoliash
University of Chicago

Markus Meister
Harvard University

Hermann Riecke
Northwestern University

H. Sebastian Seung
MIT

Charles Stevens
Salk Institute

Appreciation for theoretical approaches in biology has been increasing over the past decade as biologists have recognized that many problems in integrative biology require theory and physicists have been caught up in the excitement generated by rapid advances in biological research. Neurobiology is an area of special interest in this context because the challenges offered by the brain, this most complex machine, seem especially suited to theory. The goal of this symposium is to survey some areas of neurobiology that seem most in need of theory, and to explore some of the theoretical approaches that have been especially successful. The speakers will provide background information to make the material accessible to those without training in biology. Areas covered with include bird song, vision, the olfactory system, motor control, and networks.

The workshop is sponsored by the Institute for Complex Adaptive Matter (ICAM), a distributed "Institute without Walls", an independent unit of the University of California, devoted to the search for the organizing principles that govern Emergent Behavior in Matter, be it biological, chemical, or physical and is supported by a Grant from the National Science Foundation.

For more information, visit http://icam.ucop.edu/workshops.html